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Abstract of the Invention

A system and method is provided for adjusting transmission power of different portions of a data packet. The system and method is especially useful when utilizing the IEEE 802.11 standard protocol due to the varying transmission data rates of a packet. A IEEE 802.11 packet includes a preamble portion, a header portion and a data portion.

10 The preamble portion has a data rate of 1 Mbps, the header has a data rate of 1 or 2 Mbps and the data portion has a data rate of 1, 2, 5.5 or 11 Mbps. At a given fixed power level, a transmission at a higher data rate has a lower transmission range than a transmission at a lower data rate. Therefore, the present invention provides for a system and method that adjusts the power level of different portions of a data packet, so that the entire data packet has a more uniform range. This eliminates the need for components in the system receiving a preamble portion of a transmission at higher ranges to remain idle during transmission of an entire frame. The system and method can be applied to both access points and mobile units in a cellular communications system.

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